

Remarks

Claims 14, 15, 23, 24, and 30-36 were previously pending in this application. Claims 38-41 were withdrawn from consideration without prejudice or disclaimer. Claims 15, 31, and 36 are cancelled, without prejudice or disclaimer. Claims 14 and 33 are currently amended without introducing new matter. As a result, claims 14, 23, 24, 30, and 32-35 remain pending for examination with claims 14, 30, and 33 being independent claims.

Rejections under 35 U.S.C. § 112

Claims 15, 31, and 32 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter regarded as the invention.

In particular, claim 15 allegedly fails to further limit the scope of claim 14. Applicants disagree that claim 15 is indefinite.

Applicants note that the second paragraph of § 112 does not require that a claim in dependent form “must further limit the claim from which it depends.” Thus, the rejection under the second paragraph of 35 U.S.C. § 112 is improper. Nonetheless, to facilitate prosecution of this application, claim 15 is cancelled.

Claims 31 and 32, which depend from independent claim 30, are rejected because they allegedly recite a phrase that lacks antecedent basis. However, the allegedly offending phrase, “active impurity,” is not recited in these dependent claims. Indeed, the phrase “active impurity component” is explicitly introduced in independent claim 30. Therefore, the *prima facie* case of indefiniteness is improper.

Accordingly, Applicants request reconsideration and withdrawal of the rejections under 35 U.S.C. § 112.

Rejections Under 35 U.S.C. §§ 102/103

Claims 14, 15, 23, 24, and 33-36 are rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over the teaching of Japanese Publication Nos. 10-228974 (hereinafter “JP ’974”) and 07-328360 (hereinafter “JP ’360”).

Applicants disagree that the teachings of any of one of JP ’974 or JP ’360 anticipate or would have rendered obvious the subject matter of claims 14, 15, 23, 24, and 33-36. Again, Applicants note that these references fail to explicitly teach recrystallized silicon carbide having a pore size of at least 15 μm and comprising impurities at a concentration of less than 400 ppm. Applicants restate that the failure to recite a particular element cannot be necessarily implied. The fact that a certain impurity may be present in the teaching of JP ’974 or JP ’360 is not sufficient to establish the inherency of that characteristic. The evidence must make clear that the missing descriptive matter is necessarily present in the reference, and that it would be so recognized by persons of ordinary skill in the art. Further, an allegedly inherent limitation may not be established by probabilities or possibilities and there must be a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent limitation necessarily flows from the teachings of the cited references. In this case, no representation or explanation has been set forth to support the notion that these references necessarily teach the claimed subject matter. Indeed, Applicants have previously set forth reasons why the claimed impurity cannot be present in the teachings of the cited references, i.e., mechanical processing of silicon carbide to produce the heaters would necessarily introduce metallic impurities. Thus, each of the rejections of claims 14, 15, 23, 24, and 33-36 under 35 U.S.C. § 102(b) or § 103(a) based on the teachings of these references is improper for failing to teach each and every recited limitation.

Claims 14, 15, 23, 24, and 30-36 are rejected under 35 U.S.C. § 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. § 103(a) as would have been obvious over the teaching of Dubots et al. in U.S. Patent No. 6,162,543 (hereinafter “Dubots”).

Applicants also disagree that the subject matter of each of claims 14, 15, 23, 24, and 30-36 is anticipated or would have been obvious over the teaching of Dubots.

Dubots fails to teach an article comprising recrystallized silicon carbide having a pore size of at least about $15\text{ }\mu\text{m}$ with a pore surface area of less than about $0.04\text{ m}^2/\text{g}$, and comprising impurities at a concentration of less about 400 ppm, wherein the impurity is at least one of iron, copper, nickel, chromium and calcium. Thus, Dubots cannot anticipate or render obvious the subject matter of any of independent claim 14 and dependent claims 15, 23, and 24.

Dubots, as noted previously, teaches a siliconized wafer boat comprising silicon carbide. Because, however, Dubots fails to teach a finished wafer boat comprising recrystallized silicon carbide having pores interconnected to form a network and comprising an active impurity component at a concentration of less than 1 ppm, wherein the active impurity component is one of iron, copper, nickel, chromium, and calcium, the subject matter of independent claim 30 as well as dependent claims 31 and 32 cannot be anticipated by nor would have been obvious over the teaching of Dubots.

Further, because Dubots fails to teach an article comprising a recrystallized silicon carbide member having an interconnected network of pores that have a pore size of at least about $5\text{ }\mu\text{m}$ and comprising a nickel impurity concentration at or below 5 ppm, the subject matter of independent claim 33 and dependent claims 34 and 36 cannot be anticipated by nor would have been obvious over the teaching of this reference.

Accordingly, reconsideration and withdrawal of the rejections under 35 U.S.C. § 102 and § 103 is requested.

Conclusion

In view of the foregoing Amendments and Remarks, this application is in condition for allowance; a notice to this effect is respectfully requested. If the examiner believes that the application is not in condition for allowance, the examiner is requested to call Applicants' attorney at the telephone number listed below.

If this Response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this Response, please charge any deficiency to Deposit Account No. 50/2762 (Ref. No. S1432-700819).

Respectfully submitted,
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